

## LITERATURE CITED

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ZOOLOGY.—*A new species of the nematode genus Aphelenchooides living in sugar cane.<sup>1</sup>* G. STEINER, Bureau of Plant Industry.

*Aphelenchooides heterophallus* n. sp. was observed in a piece of sugar cane stalk originating in Jamaica.<sup>2</sup> The rind of the cane was a normal green color; the axial portion, however, had a blackish discoloredation probably caused by a fungus. It was in this latter portion that a pure culture of the new nematode species was found. *A. heterophallus* is a well characterized form, most closely related to certain species found in the mines of and associated with bark beetles of Europe and the Pacific Northwest. The present case may also involve some association with an insect (most probably a carrier relationship), although the piece of sugar cane stalk exhibited neither mines nor other traces of insects. The complete absence of saprophytic nematode species and of signs of decay seems to exclude the possibility that the infestation was picked up by contact with soil.

The thin cuticle is very obscurely annulated. The anteriorly convex head is well set off. Male and female tails differ in shape, that of the latter being conical and elongated (fig. 1B), and that of the former having a broad, obtuse base with a distinctly set off point (fig. 1D and E). The length of the female tail, however, is quite variable. The head is supported by a cuticu-

<sup>1</sup> Received December 19, 1933.

<sup>2</sup> Intercepted at the Port of Philadelphia, Pa. by inspector A. B. Wells of the Bureau of Plant Quarantine.

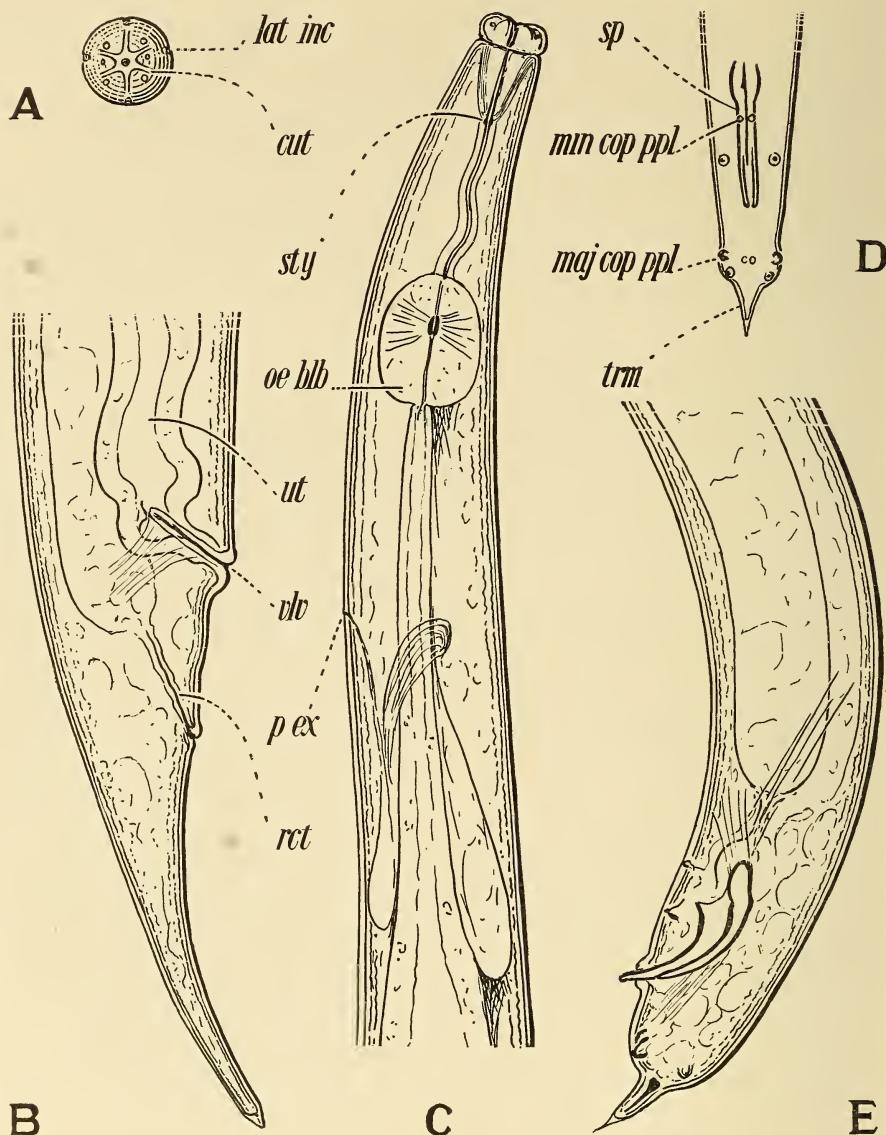


Fig. 1.—*Aphelenchooides heterophallus* n. sp.  $\times$  about 1250. A, Top view of head; *lat inc*, lateral incisure; *cut*, cuticularized framework. B, Posterior portion of female; *ut*, uterus; *vlv*, vulva; *rct*, rectum. C, Anterior portion of body; *sty*, buccal stylet; *oe bll*, esophageal bulb; *p. ex*, excretory pore. D, Ventral view of tail of male; *sp*, spicula; *min cop ppl*, small copulatory papilla; *maj cop ppl*, large copulatory papilla; *trm*, terminal processus. E, Lateral view of tail of male.

larized framework which is star-shaped in front view (fig. 1A). The arrangement of the sense organs is that typical for the genus. In a front view of the head a rather remarkable lateral and medial incisure is seen on the periphery. The delicate buccal stylet has only a slight indication of basal knobs. The very large esophageal bulb, located about three spear-lengths behind the anterior end, is provided with small valvulae and rather reduced muscles. The rectum is about as long as the anal body diameter. Males and females are equally numerous.

The most characteristic feature of the female is the prominent vulva located near the anus (fig. 1B), the distance between vulva and anus being only about half the length of the tail. The single ovary is not reflexed. There is no posterior uterine branch.

In the male the terminal processus also varies somewhat in size and shape. The spicula are juxtaposed (fig. 1E) and of quite characteristic shape, though they still retain the outlines of typical *Aphelenchoides* spicula. There are two small and three large pairs of copulatory papillae (fig. 1D and E). The smaller ones are close to the ventromedial line, one pair being about level with the proximal third of the spicula in front of the anus, the other in about the middle of the tail. Of the three larger pairs the first is located a little caudad of the middle of the spicula, the second ventro, the third dorso-submedial, close to the base of the obtuse portion of the tail.

	med. bulb	nrv. ring	70.			
female—	1.0 .97	5.2 1.7	6.1 1.7	92.6 2.2	95.7 1.3	0.75 mm.
			74.			
male—	1.3 1.1	6.3 2.2	7.1 2.2	M 2.9	97.5 1.6	0.71 mm.

#### DIAGNOSIS

*Aphelenchoides* with delicate, minutely knobbed stylet. Vulva prominent; distance from vulva to anus about one-half the length of tail or less. Male tail with broad, obtuse basal portion ending with a distinctly set-off finger-like processus. Male papillae as follows: A pair of small papillae subventral about level with the proximal third of the spicula; a similar pair also subventral in the middle of the tail; a pair of larger ones, ventrosubmedial, slightly caudad of the middle of the spicula; a second and third larger pair ventrosubmedial and dorsosubmedial respectively, at the base of the obtuse portion of the tail. Spicula juxtaposed, aphelenchoid.

*Type host:* Sugar cane.

*Type locality:* Jamaica.